Delivering healthcare infrastructure and services through public-private partnerships

Delivering healthcare infrastructure and services through public private partnerships – the Lesotho case

Dr. Mark Hellowell, Director, Global Health Policy Unit, University of Edinburgh

ABSTRACT

Many governments in Africa are establishing public-private partnerships (PPPs) to provide healthcare infrastructure and services. We know very little about how healthcare PPPs are planned and implemented in Africa, and even less about the associated outcomes. This paper begins to address this gap through a detailed case study of an innovative, ambitious and complex partnership contract in Maseru, Lesotho. The scheme has been labelled 'the future of healthcare delivery on the African continent' and encompasses the design, build, partial financing and full operation of a new hospital facility alongside a wide range of core clinical services. This chapter draws on documentary data to evaluate the main features of the contract, the procurement process and monitoring arrangements, and the outcomes in terms of benefits and costs. A key finding is that payments to the private operator are far higher than was expected pre-contractually, and have become a major source of budgetary uncertainty, as well as a demanding call on government's healthcare resources. We conclude that successful social infrastructure PPPs in Africa will require considerable investments in contract management skills, strong budgeting institutions and mechanisms, and enhanced (and more independent) scrutiny of plans and forecasts of financial impacts.

1 INTRODUCTION

Many governments in Africa are seeking to establish public-private partnerships (PPPs) to provide social infrastructure and services. There is a substantial body of research on PPPs in high-income countries, but we know very little about how these initiatives are planned and implemented in these low and middle income countries (LMICs), and still less about the associated outcomes. These are important lacunae given the distinctive set of challenges that long-term, complex and capital-intensive transactions may give rise to in African countries. This paper begins to address these gaps through a detailed case study of a project in Lesotho, in southern Africa. This is an 'integrated' PPP scheme (see Table 1) that incorporates the financing and construction of a 425-bed national referral facility (the Queen 'Mamohato Memorial Hospital), a gateway clinic and three urban 'filter' clinics alongside a comprehensive range of clinical services to be delivered over a 16 year period. The contract is unusual in combining the private delivery of new healthcare infrastructure

alongside a wide range of clinical activities. As such, it was described as 'an innovative and sustainable model for governments across sub-Saharan Africa' by Jean Philippe Prosper, Director for Eastern and Southern Africa at the International Finance Corporation (the private finance arm of the World Bank Group), and as 'the future of healthcare delivery on the African continent' by Richard Friedland, chief executive officer of Netcare, the majority shareholder of the eventual private operator (International Finance Corporation, 2010; Netcare Limited, 2012).This chapter draws on documentary data to evaluate:

1 The financial, contractual and technical features of the contract
2 The structure of the market through which it was established and the adequacy of the monitoring and evaluation arrangements
3 The outcomes in terms of benefits and costs for the wider healthcare system.[1]

The article concludes with an outline of policy implications for decision-makers and practitioners in Africa.

Table 1. A typology of public-private partnerships in the healthcare sector		
PPP Category	Common term (examples)	Definition
Service	Operating contract (Spain, Cambodia, Vietnam, UK, Nigeria; many instances of primary care contracting in various African countries).	A private operator is contracted to operate and deliver (wholly or partly) publicly-funded healthcare in a publicly-owned facility.
Facility/finance	PFI, PPP, P3 (Australia, Brazil, Canada, Chile, Mexico, France, Italy, Portugal, South Africa, UK).	A public agency contracts a private operator to design, build, finance and operate a hospital facility. Most clinical services within this are provided by government.
Integrated	PPP (elective and diagnostic treatment centres in England, the 'Alzira' hospital model in	A private operator builds or leases a facility and provides free (or heavily subsidised) healthcare services to a defined population.

[1] The author was part of a team of researchers that conducted an evaluation of the World Bank's role in the project as part of the Bank's *Implementation and Completion Report*(ICR)(World Bank, 2013). Much of the data collected as part of that assignment is owned by the Bank and is not in the public domain. The case study reported in this chapter is therefore based on an analysis of publicly available data (including the ICR itself).

	Spain,[2] hospital and primary care services in Maseru, Lesotho).	
Co-location	Co-location (England, Lesotho, Nigeria, Mexico, Spain).	A public agency allocates a portion of a hospital's land or premises for use by a private operator in exchange for payment and specified benefits to the agency.

Source: Adapted from Montagu and Harding (2012)

2 CHALLENGES AND OPPORTUNITIES OF THE PPP MODEL IN AFRICA

The financial case for the PPP model resides in its ability to allocate the risks of delivering infrastructure and services more effectively than alternative methods. This requires that three conditions are met, both of which are dependent on the state's contractual and commercial abilities (Iossa and Martimort, 2012).

First, the payment to the operator must be determined by whether, and the extent to which, the infrastructure and services specified in the contract are available for use, and are at the agreed standard (Farquharson et al, 2011). If the payment is linked to key performance indicators that are well-specified and measurable, adequate arrangements are in place for monitoring and verifying performance, and contractual relations are equitable between the parties (Lonsdale and Watson, 2007), then failures to achieve specified outcomes should result in financial losses for the private operator. It has a strong incentive to avoid losses and, so, deliver on its obligations.

[2] A comprehensive evaluation of the globally influential 'Alzira' model can be found in Accerete et al (2012).

Second, as the payment mechanism places a ceiling on the operator's total revenues, there is an incentive for the operator to minimise production costs (thereby maximising profits). A distinctive feature of PPPs is that they 'bundle' together a range of activities – the design, construction, operations and maintenance of assets, alongside a range of services – in a single contract, such that the operator has the *capability,* as well as the incentive, to exploit economies of scope (Iossa and Martimort, 2012), eg by investing in innovations which lower production costs (Barlow and Köberle-Gaiser, 2009).

Finally, if, in addition, the structure of the market permits an adequate level of competition between bidders, bidders are able to foresee the opportunities to minimise production costs through the exploitation of economies of scope, and state purchasers are sufficiently well-resourced to negotiate effectively, then this incentive framework should generate downward pressure on the prices quoted by bidders, and therefore the final contract price borne by taxpayers.

The emphasis placed on risk and incentives in the financial case for PPPs reflects the fact that large-scale government investment projects are frequently characterised by higher than expected costs and/or lower than expected benefits. Flyvbjerg et al (2002) attribute this to strategic behaviour by government actors in a context in which information is poor, and there are inadequate processes of independent scrutiny and challenge. For example, state planners may deliberately underestimate future costs and overestimate benefits in order to increase the likelihood that favoured initiatives are able to proceed (*strategic misrepresentation*). Other factors originate in strategic behaviour by market actors, which are facilitated by asymmetric information. For example, in a conventional procurement in which the risk of cost overruns is borne by the state, the bidder has an incentive to offer a lower price than it actually intends to charge, such that the 'wrong' bids are selected (a case of *adverse selection*). Similarly, in the post-contractual phase, the operator may take actions that reduce, in ways that the state may find it difficult to observe or counteract, the quantity or quality of output (a case of *moral hazard*).

Transferring financial risk to the operator can address some of these problems. When the operator bears a risk, it has an incentive to reduce the magnitude and severity of it. If actual

production costs are higher than those the operator expected at the time of contract close and/or revenues are lower, eg because the quality of its services are verifiably lower than those contractually specified, it will fail to achieve its expected rate of return. This generates an accountability environment that may, more often than for alternative delivery mechanisms, lead to infrastructure being delivered to time and to budget, and human-resource practices and management that reduce the erosion of social surpluses attributable to moral hazard (Hellowell et al, 2015).

The operator of a PPP is financed with a mixture of equity and debt, but mostly debt. In cases where the costs of project delivery vary considerably from those expected at the time a deal is agreed, the operator may default on its debt, with serious implications for its shareholders and, in extreme cases, its lenders. As a result, lenders have an incentive to assess the robustness of business plans before contracts are signed, ensuring that forecasts of costs and revenues are robust, and risks are appropriately allocated. Lenders are unlikely to accept at face value the forecasts of managers and will seek independent advice when undertaking forecasting, due diligence and risk assessment. The involvement of lenders – as a source of independent scrutiny and challenge – plays a key role in addressing adverse selection, which is of benefit to shareholders and may lead to relatively good outcomes for the public sector (Hellowell et al, 2015).

However, evidence shows that PPPs provide only a partial solution to problems of strategic behaviour – on both the provider and the purchaser side. The structure of the market before and after contracts are signed has been highlighted as an important variable in determining the distribution of *market power* between the parties (Colla et al, 2015). In particular, the degree of contestability during and after the procurement process can influence the types of contract relationships that develop, the nature of operation and how the economic gains from the partnership are divided. Where it is difficult to achieve competition in procurement, or it is difficult to cancel contracts in operation, due to the absence of other providers, private operators may have significant market power, with the effect that the ability of government purchasers to safeguard their interests (and/or those of service users) is reduced within the partnership.

2.1 POTENTIAL SOURCES OF HIGHER COSTS

In addition to these limitations, there are several features of the PPP model which may generate additional financial costs. The most important of these are transaction costs and costs of using private capital. The majority of economic theorists examining these issues have taken a social welfare perspective when considering costs, eg Grout (2003); Reiss (2005); Iossa and Martimort (2012). Hence, analysis has generally focused on whether PPPs are likely to reduce consumption of society's real resources in comparison with alternative procurement options – and not whether the price by the government purchaser (Hellowell, 2015). There is very little theoretical research on this latter question, despite its apparent relevance for decision-makers. A notable exception is Ross and Yan (2015), in which it is recognised that the government's objective may be to get a project delivered for the lowest financial cost *to the* government, rather than the maximization of total social surplus.

2.1.1 TRANSACTION COSTS

The Transaction Cost Economics (TCE) framework, pioneered by Oliver Williamson (1985; 1990), has been used to provide an account of why complex contracts are likely to be associated with higher transaction costs than other forms of delivery (Lonsdale, 2005). In this framework, economic actors – buyers and sellers – are seen to be constrained by bounded rationality, while the self-interest orientation of all actors is characterised by opportunism, or 'self-interest seeking with guile' (Williamson, 1985, p.47-8). When opportunism on the part of buyers and sellers is combined with bounded rationality, either of the parties are liable to take advantage of gaps in the others' knowledge to further their interests, at the expense of efficiency (Guasch et al, 2014; Lohmann and Rötzel, 2014; Qu and Loosemore, 2013)

The impact of these behavioural factors on outcomes is dependent on two dimensions of the transaction: *asset specificity*, ie the extent to which investments by the parties are specific to the transaction, and *uncertainty* eg the extent to which current objectives are subject to change. In a private finance contract, both asset-specificity and uncertainty are relatively high. In the former case, both parties face considerable switching costs if they wish to withdraw from the deal (see section 3 for an example). In the latter case, the duration and scope of contracts ensure that, in a rapidly changing industry such as

healthcare, there is a strong likelihood of contractual incompleteness, and a need for renegotiation during the contract (Lonsdale, 2005). In this context, the TCE framework predicts that the processes of contract negotiation, and monitoring and evaluation, will be extensive and involve substantial financial costs for both buyers and sellers.

There is some empirical evidence that supports this prediction. Dudkin and Välilä (2005), for example, showed that a sample of PPPs undertaken in the UK generated higher transaction costs in the pre-contractual phase – about 10% of the capital expenditure value of the project, on average, for both contracting authorities and preferred bidders, and up to 5% of that value for losing bidders – than other forms of procurement. They attributed this to their longer-term character, greater financial complexity and emphasis on risk-sharing, all of which tend to increase tendering and negotiating costs, and will often lead to limited competition both *in* and *for* the market, ie during procurement processes.

2.1.2 THE PRIVATE COST OF CAPITAL

The rates of return on private capital (debt and equity) may generate financial costs that are higher than those of other delivery mechanisms (Hellowell and Vecchi, 2012). The interest cost on private finance has been an important focus of academic research and official audit, (eg McKee et al, 2006; National Audit Office, 2015). This is normally a multiple of the interest rate that the government pays on its own borrowing. However, it is unclear that this is a relevant comparator, since borrowing is only one source of a government's income, alongside taxes, fees, asset sales, interest on cash holdings, and so on, and hence the sources of funds for the marginal project is a weighted combination of these. Determining the right approach to estimating the cost of capital for government varies according to who is doing the analysis. From the perspective of a Ministry of Finance, the cost of capital is, in economic terms, equal to the opportunity cost – the value of the *next best* alternative government project. In contrast, from the point of view of a Ministry of Health, or an individual healthcare organisation, the cost of loans from national/sub-national governments, or from debt instruments issued directly by the organisation, may be more relevant comparators.

In both cases, evidence shows that the private operator's weighted average cost of capital will often be in excess of this (Colla et al, 2015). In Africa, where domestic banks hold only short-term deposits, and other liabilities, an additional problem is the high price of long-term domestic loans. Most social infrastructure projects require a repayment period of at least 15 years to be affordable (Hellowell and Vecchi 2012). Hence, while long term financing is essential, it is often not available in sub-Saharan Africa in, which, for instance, loan tenors are commonly five years or less, and even where longer-term financing is available, commercial lending interest rates are typically high in comparison with prices for comparable instruments in high-income countries (Irving and Manroth, 2009).

2.2 GOVERNMENT COSTS AND RISKS

Private finance contracts generate costs for the public sector over many years, but these are not well-captured by the budgeting system. In most developing countries, even a Medium-Term Expenditure Framework involves a planning horizon of just three-years (Fölscher 2007). For larger infrastructure projects, the associated costs for the public sector may be low (or zero) in this period however high they may be thereafter. The fact that the cost of projects is deferred to future budgeting periods may adversely influence the *selection, specification and scale* of investments, making it more difficult for allocative efficiency and long-run financial sustainability to be achieved. The scale of costs for government, and service users, that PPPs can give rise to, and their impact on sustainability, is a common theme in PPPs internationally (Monteiro, 2013; Acerete et al, 2009; Koppenjan and Enserink, 2009; Shaoul et al, 2011).

However, it is evident that, in Africa, the consequences of adverse selection may often be more severe than in the comparatively well-resourced welfare states of OECD countries.

2.3 SUMMARY

The section above allows three theoretical propositions to be advanced in relation to the opportunities and challenges associated with the PPP model in Africa. The first is that, because of the financial incentives they generate, PPPs may generate positive outcomes in terms of the efficiency and quality of services delivered. The second, is that positive outcomes are likely to be moderated (and adverse outcomes exacerbated) by weaknesses in the commercial capacities of the state. The third, is that contract prices will be high, as finance prices are subject to upward pressure from capital market constraints, while

budgeting inadequacies that fail to capture these means that PPPs will often impact adversely on the sustainability of the state's financial position.

The following case study provides evidence in relation to these theoretical propositions.

3 CASE STUDY: A LARGE 'INTEGRATED' PPP FOR A NEW REFERRAL HOSPITAL IN MASERU, LESOTHO

In January 2007, the Government of Lesotho initiated the tender for a contractor to replace the ageing national referral hospital, the Queen Elizabeth II, and upgrade a network of primary care facilities. On 27th October 2008, it signed a contract with Tsepong, a consortium led by Netcare Hospital Group, a South African healthcare provider, to design, build, finance and operate a 425-bed national referral facility, the Queen 'Mamohato Memorial Hospital – QMMH, and a gateway clinic adjacent to the hospital. The project would also refurbish and re-equip three urban 'filter' clinics: Qoaling, Mabote and Likotsi (Vian et al, 2013).

As at financial close, the total capital expenditure requirement of the project was estimated by Tsepong at M1,164,541 (US$134.98 million in 2017 dollars). In return for delivering the specified assets and providing a comprehensive range of clinical services in the hospital, Tsepong has received a *unitary fee* from the government, covering interest payments and profits for the private operator and the cost of infrastructure-related and clinical services. This is identified in the contract as M255,550,143 (or US$29.61 million in 2017 dollars). In principle, this is payable *as, when, and to the extent that* the outputs specified in the contract are delivered at the agreed standard. Independent monitors were appointed to evaluate the quality of construction and operations, and structures were established in the contract for joint oversight by Tsepong and the government. Use of the facility is free to patients at the point of delivery, except for a small co-payment (for the non-poor) in respect of some services. These fees ultimately go to the government, though Tsepong retains 10% of the fees to cover its administration costs (Vian et al, 2013).

Table 2. Details of funding sources, funding uses, revenues and returns		
SOURCES		

	M'000	%
Government Grant (excl. VAT)	400,000	34.3
Commercial Debt – Drawdowns	589,830	50.6
Commercial Debt – Capitalised Interest	70,622	6.1
Mezzanine Debt		
DBSA	56,207	4.8
Netcare	37,472	3.2
Shareholders Contribution		
LEE Equity	6,245	0.5
Netcare Equity	4,164	0.4
TOTAL	**1,164,541**	**100**
USES		
	M'000	**%**
Building Costs	737,121	63.3
Equipment	208,183	17.9
Commissioning Costs	98,854	8.5
Capitalised Interest	70,622	6.1
Other	49,761	4.3
TOTAL	**1,164,541**	**100**
REVENUES AND RETURNS	%	
The Contractually-Specified Unitary Fee	255,550	
Nominal equity IRR (after Advance Company Tax)		25.2
Interest rate on mezzanine debt		13.1
Interest rate on commercial debt		11.62

Source: Government of Lesotho (2009)

The terms of the contract required both the government and the operator to contribute to the capital expenditure requirement (Downs et al, 2013). Direct government capital of M400 million was provided to co-finance construction, and a further M86 million was paid for improvements to the construction site itself. Private capital of M765 million financed the majority of capital expenditure. Of this, a loan provided by the Development Bank of Southern Africa (DBSA) accounted for 86% of the capital expenditure, at an interest rate of 11.62%. The DBSA and Netcare also provided subordinated debt, of M56.2 million and

M37.5 million, respectively, which accounted for 12.2% of total capital expenditure. This portion of the debt, which is 'junior' to the senior tranche – so that, if Tsepong experiences a cash-flow shortfall, payments to senior debt are prioritised over those to the mezzanine debt – was provided at an annual interest rate of 13.1% (Government of Lesotho, 2009).

Finally, Netcare and a group of regional investors, based in both Lesotho and neighbouring South Africa, provided equity capital of M10.41 million. Of this, Netcare provided M4.16 million and local investors M6.25 million. Hence, Netcare is the largest shareholder, with 40% of equity. When the contract was signed, the forecast Internal Rate of Return on all shareholder capital was 25.2%. It should be noted, however, that actual returns may have been higher or lower than this rate, and this information is not in the public domain.

These returns are higher than is normal for comparable PPPs in the advanced economies. In the UK, for example, the Internal Rate of Return on equity capital has been in the range of 12-18% (Hellowell, 2013) – and research has shown that this range has been sufficient to provide shareholders with excess returns – illustrated, for example, in high windfall profits when shares are sold in the secondary market (National Audit Office, 2012). This supports the proposition that economic variables common to developing countries, such as capital market constraints, macroeconomic risks and political uncertainty, are likely to increase the cost of capital on PPPs in such contexts – and thus the final cost of contracts to the associated government.

Of great importance for the evaluation of the project is its capital structure: a debt-to-equity ratio of 86/14. This is normal for a health sector PPP in a high-income country, but high for a contract that incorporates full clinical services provision, and located in a country where experience with PPP is limited. A high debt-to-equity ratio (gearing) has various short-term advantages for the main contractual counterparties. For the public purchaser, a higher gearing lowers the operator's cost of capital and reduces the minimum fee that the operator is able to accept – since, for a given fee, the operator will achieve a higher return to equity with higher gearing. However, the fact that the operator is so thinly capitalised reduces its ability to bear risk, making is less likely that scheduled debt payments can be made if cash-flows fall below the expected level. This increases the probability that the

sponsor will default on its debt – an eventuality that did in fact occur, as will be described in sections below.

3.1 SERVICE PROVISION AND OPERATOR REMUNERATION

The three filter clinics began operating in May 2010, and the hospital opened in October 2011. The care delivered within these facilities includes the full range of services normally expected in a referral hospital of this scale in Africa, though it omits some services that a large hospital would normally provide in a high-income context, including treatments such as transplants, joint replacements, dialysis, cardiac surgery (with the exception of emergency procedures), chemotherapy and radiotherapy, obstetrics and gynaecology, plastic surgery and dentistry (Vian, 2013).

The contract specifies that the operator will be paid an annual unitary fee of M255,550,143 (see Table 1). The fee can be adjusted if services are verifiably failing to meet basic standards, as outlined in a range of key performance indicators applying to each listed service (Vian, 2013). To this extent, the structure of the deal resembles that of an 'availability-based' contract as commonly used in more developed economies, such as Australia, Canada and the United Kingdom. However, a distinctive feature of this contract is that the fee can vary according to the level of activity. The fee can vary within defined parameters according to the extent that outputs specified in the contract are delivered by the operator.

There is a minimum number of patients (the lower demand parameter) and a maximum number (the upper demand parameter) to be treated per year. These parameters are broken down into inpatients and outpatients (Vian et al, 2013).[3] The contract defines the penalties to be levied if there is 'under-performance' in service-provision, ie the number of treatments is lower than the demand parameter, and also defines the additional fees to be

[3] In effect, the fee is set to provide Tsepong with sufficient income to finance the functions of the business, including expected returns to equity and debt, for the actual level of activity. In health financing terms, the fee resembles a retrospective global budget rather than a prospective treatment-based payment. However, in accordance with the principle of risk transfer, this also includes an element of performance-based payment.

paid if there is 'over-performance', ie the number of treatments is greater than the upper demand parameter.

Table 1. Demand parameters for inpatients and outpatients

	Lower parameter	Upper parameter
Inpatients	16,500	20,000
Outpatients	258,000	310,000
Total	274,500	330,000

Source: Vian et al, 2013

In each of the years of operation, the number of patients treated by Tsepong has been higher than the upper parameter in respect of both inpatients and outpatients. In 2011 and 2012, Tsepong chose to defer fees for these treatments. However, it has chosen to invoice the government for additional treatments since the beginning of 2013. Patient numbers exceeded the upper parameter by 25% in that year (see table 5 for the financial impact of this).

In addition, the contract defines the mechanism by which the fee is adjusted for inflation. This mechanism has two notable features. First, the index is applied to the entire fee, so that the indexed proportion of the fee is greater than the proportion of Tsepong's costs, which vary with inflation (Government of Lesotho, 2009). This 'over-indexation' reduces the fee in the early years of the contract, but increases the total payment to be made over the contract period, and creates a risk for the government that inflation will be higher on average than forecast at the point of financial close (while Tsepong's nominal returns are exposed if the opposite occurs). Second, the index is weighted towards Lesotho CPI and a Composite Medical Index (consisting of Lesotho CPI plus the difference between South African Medical CPIX and South African CPIX) (Marriot, 2014), and therefore fails to generate a fee that is in step with Tsepong's production costs.

This is a concern for the Ministry of Health because its own budget is unlikely to move in step with the fee – the key parameters of which are general and medical inflation in South Africa. Conversely, it creates a risk for Tsepong that its production costs are not reflected in the unitary fee. For example, if there are changes in the price of local labour and supplies, these may not be adequately captured in the index, with the result that the fee is too low to finance the functions of the business. This occurred in 2013, when the government implemented a substantial increase in civil service wages, along with a re-grading process that also increased labour costs. The implementation of these policies led to pressure on Tsepong to increase wages in an attempt to avoid the aggravation of existing recruitment and retention problems, and maintain adequate qualified staff (see section 3.5 for more detail).

3.2 THE NATURE OF THE MARKET THROUGH WHICH THE CONTRACT WAS ESTABLISHED

Only two consortia, both anchored by South African hospital operators, Netcare and Life Healthcare, submitted responses to the government's Request for Proposals (RfP) document (Downs, 2013). At the conclusion of the RfP evaluation process, it was determined that both bids had significant weaknesses and that neither was compliant with RfP objectives (Government of Lesotho, 2007). As a result, on 30th October 2007, the government asked for stronger and more detailed bids for the project in a request for Best and Final Offers (RfBAFO). It is apparent from this document that the government was, at this point in the procurement process, proposing a *materially different project* from the one implemented-in terms of its nature, scale and costs, the proportion of private financing involved, and the annual payment that the government perceived that it was able and willing to make.

The most notable points that emerge from this comparison are:

1 In the RfBAFO, the expected total capital expenditure requirement (capex) is identified as approximately M500 million, including VAT. This is less than half the capital expenditure requirement recorded in the financial model, of M1.165 billion. Although clear evidence is lacking, it appears that the government decided to add a further filter clinic, a gateway clinic and a number of additional services, such as a neonatal intensive-care unit, laparoscopy, neurosurgery, and MRI facilities, to the

output specification at some point during the period of non-competitive exclusive negotiations with Tsepong, implying that the technical solutions related to these outputs, and associated prices, were determined in the absence of competition.

2 At the time of the RfBAFO, it was expected that public capital of M400 million, including VAT, would account for 80% of capex. It was anticipated that only 20% of the capital (or M100 million) would be raised by the operator. In the financial model of 20th March 2009, Tsepong records the proportions as 34.3% public finance against 65.7% private finance, or M765 million in private sector equity and loans.

3 In the RfBAFO, the government recorded its assessment of the affordable fee at M180.4 million per year, excluding VAT. In contrast, the financial model specifies the initial unitary fee (stated in 7th April 2007 terms) as M255.6 million, excluding VAT.[4]

The key points of this comparison are summarised in Table 3 below.

Table 3: Comparison of financial values between RfBAFO and Financial Close

Financial variables	*Financial values expected at RfBAFO (30 October 2007)*	*Financial values recorded at Financial Close (20 March 2009)**
Capital expenditure	M500 million	M1,165 million
Public versus private financing	M400/M100 million (80% public versus 20% private)	M400/M764.5 million (34.3% public versus 65.7% private)
Expected unitary fee	180.4	M255.6
* Note all figures are in 7th April 2007 monetary values		
Sources: The Kingdom of Lesotho, New Referral Hospital Public Private Partnership, Request for Best and Final Offers, 30 October 2007; and Tsepong (Pty) Ltd, Kingdom of Lesotho, New Referral Hospital Financial Model, Financial Close Version 6.01.		

[4] Because of the 100% application of an inflation index, discussed below, the actual amounts paid from the first year of operation in 2011/12 were considerably higher than this amount.

Clearly, these points are related: the growth in the capital expenditure requirement during the final months of negotiation increased the proportion of private financing required, and, together with certain additional services, and changes in the cost of capital, led to an increase in the initial unitary fee.

On 14th December 2007, the Netcare-led consortium was appointed preferred bidder. This was followed by a 10 month period of bilateral negotiations, and the contract was signed on 27th October 2008, with financial close on 20 March 2009. It was during this non-competitive period that the above-mentioned changes to the scale and structure of the contract were agreed. Thus, there is a question about the extent to which the output specification and contract price can be regarded as having been competitively determined. It is notable that, in other government procurement markets, making changes of this scale during the preferred bidder process would be unlawful. For instance, under European Union procurement regulations, bidders may only 'fine tune, specify and clarify' their bids at this stage, reflecting a concern that such negotiations can undermine the degree of competition.

In addition, during this period of final negotiations, the DBSA changed its financing terms, from 7% to 11.62% (Government of Lesotho, 2009). Again, it is notable that this change – ostensibly, a result of changing base rates during the early onset of the global financial crisis – was made in the absence of any competitive pressure, either on the borrower (Tsepong) or on the lender (the DBSA).

3.3 THE INSTITUTIONAL AND ORGANISATIONAL CAPACITY SURROUNDING THE CONTRACT

The contract includes provisions for an extensive monitoring framework to assess Tsepong's performance against a large number of key performance indicators. There are five key strands to this framework:

1 An Independent Monitor has been employed to conduct quarterly assessments of performance, and make recommendations about the appropriate penalty (if any) to be applied to the unitary fee.

2 Internal monitoring is conducted by Tsepong, which drafts a monthly report on aspects of performance such as the volume of services provided, patient and family satisfaction, local economic empowerment indicators and staff training.

3 The Ministry of Health is allowed to monitor performance; though in practice, it has very limited capacity to do so (UNICEF and World Bank, 2017).[5]

4 A Joint Services Committee, with representation from Tsepong and the government, is tasked with reviewing performance towards specified targets, and considering the case for any needed modification of the PPP agreement.

5 The private operator must obtain and maintain accreditation by COHSASA, the Council for Health Service Accreditation of Southern Africa. If Tsepong fails to maintain accreditation, the Ministry of Health has a right to terminate the contract (Vian, 2013).

This is perhaps the strongest element of the contractual management system. In order to achieve accreditation, healthcare providers need to achieve a compliance rate of 80% against International Health Standards, with all areas designated as 'critical' being compliant. The new hospital obtained the COHSASA accreditation for compliance in November 2013 with an overall score of 94%. The three filter clinics were accredited by COHSASA earlier in 2013 with a score of 89% (Vian et al, 2015). This accreditation was not previously attained by any health facility in Lesotho, and by only one other public hospital in the region besides South Africa. The accreditation process should give the MoH comfort that the hospital is delivering a high standard of medical care. COHSASA's standards are considered demanding by regional standards. However, COHSASA cannot hold Tsepong to account over its delivery of the contract. This part of the monitoring arrangements can exert pressure on Tsepong to deliver high quality care, but it cannot ensure that the incentive framework intended to be generated by the contract's payment mechanism is effective.

3.4 THE OUTCOMES FROM THE PROJECT: INFRASTRUCTURE, SERVICE-DELIVERY AND BUDGETARY IMPACT

[5] Currently only two full-time Ministry of Health employees manage all of its outsourced services, including the QMMH, which collectively account for over 52% of the total amount it spends (Unicef and World Bank, 2017)

The filter clinics opened in May 2010, and the hospital in October 2011. In both cases, construction was completed ahead of schedule, indicating that the contract was successful in transferring asset-related risks to Tsepong. There is also evidence that Tsepong is delivering services of higher quality than was the case in the old Queen Elizabeth II hospital (Table 2).

Table 4. Comparison of clinical outcomes and productivity at the PPP in 2012 compared with equivalent measures in the former public facilities

	PPP facilities	Former public facilities	% difference
Hospital beds	390	409	-5%
Filter clinic beds	24	8	200%
Total beds	414	417	-1%
Inpatient admissions (hospital)	23,341	15,465	51%
Inpatient days (hospital)	116,648	91,808	27%
Outpatient visits (incl. filter clinics)	374,669	165,584	126%
Deliveries (incl. filter clinics)	7,431	5,116	45%
Average length of stay	5 days	5.94	-16%
Bed occupancy rate	82%	61%	33%
Death rate (incl. filter clinics)	7.1%	12%	-41%
Maternity death rate (incl. filter clinics)	0.21%	0.24%	-10%
Paediatric pneumonia death rate (hospital)	11.9%	34.4%	-65%
Still birth rate (hospital)	3.1%	4%	-22%
Survival of very low birth weight infants (=1,500g)	69.8%	n/a	n/a
C-section rate (incl. filter clinics)	26.8%	7.2%	272%
Patient satisfaction rate (incl. filter clinics)	86%	70.7%	22%

Source: Adapted from World Bank, 2013

There is strong evidence that the introduction of strong management systems and protocols have played an important role in the achievement of higher quality and quantity of care in the new facilities. For example, Vian et al (2015) show that, at both the hospital and the filter clinic sites, new policies and guidelines have enhanced the quality of services delivery by outlining and setting standards and holding individual staff accountable for compliance.

However, there is a question about whether these positive outcomes have been driven by the payment mechanism itself or, conversely, Tsepong's willingness to perform effectively (combined, perhaps, with the need to achieve COHSASA accreditation). It is evident that the Ministry of Health has limited ability to deploy the contract as a regulatory mechanism (World Bank, 2013), creating the potential for moral hazard, and undermining the incentives at the heart of the financial case for the PPP (as described above). At the same time, the project is clearly of very high strategic value for Netcare *as a multinational corporation*. At a presentation to investors in March 2012, Richard Friedland, CEO of Netcare, said of the PPP:

We see this [the Lesotho PPP] as the future of healthcare delivery, not just on the rest of the African continent but in our own country [South Africa] as well.

It is surely beneficial to have in place a private operator that has a strong corporate commitment to good project performance. And it is of significance that an operator may be motivated to achieve a successful project in the absence of financial incentives to do so. One might, however, have concerns that such motivation may not be sustained over the contract period, in which, for example, corporate strategies may change as macroeconomic developments occur, and new personnel, with less personal association with the project, become influential.

3.5 BUDGETARY IMPACT

It is notable that the government and its advisors chose to proceed with the PPP contract, despite the increase in the annual unitary fee from the 'affordability threshold' of M180.4

million to M255.6 million during the final stages of bidding – a 42% increase. Overall, the amounts paid to Tsepong by the MoH during the operation of the contract have been considerably higher than was forecast at the point of financial close. This is for four main reasons:

1 The payment is inflation-indexed. The related adjustment is applied to the entire unitary fee – and other parts of the payment – rather than only that proportion of the payment relating to Tsepong's variable costs, ie the costs that are affected by changes in the price level (Yescombe, 2016). The result of this 'over-indexation' is to make the unitary charge lower in the early years and higher in the later years than would otherwise be the case. This factor alone led to a 68% increase in the fee, from M255.6 million in 2008/09, to M439.4 million in 2015/16, net of Value Added Tax (VAT) (UNICEF and World Bank, 2017).

2 The unitary fee recorded in the financial model is net of VAT; but, in fact, the MoH must pay a rate of 14% on the contract price (Vian et al, 2013). Hence, MoH expenditure on the contract, gross of VAT, was M517 million in 2015-16.

3 The contract sets the annual 'upper demand parameters' at 20,000 for inpatients and 310,000 for outpatients. Treatment of patients in excess of these parameters leads to higher payments, of M9,491.64 (including VAT) per inpatient and M57 (including VAT) per outpatients. In practice, the volume of treatment has exceeded these upper demand parameters (by several thousand inpatients, and several tens of thousands of outpatients) in every year of the contract's operation up to the latest year for which we have data (2015/16).The Ministry of Finance has not budgeted for the additional services to be paid, and it has only partially paid them or paid them with a substantial delay (UNICEF and World Bank, 2017).

4 There are a number of other elements of the cost. As noted in (3), the government has not always been able to execute the payment on time, and Tsepong has the right to charge interest on any outstanding fees. In addition, there have been several instances of Tsepong defaulting on the DBSA loan, due to missed or delayed payments. As a consequence of this, the DBSA has charged Tsepong late payment fees, and these have been passed on to the government in the form of higher fees. In addition, there remain several issues affecting the PPP that are currently under arbitration – including, among others, interest charged on late payments, some components of the payments for additional treatments, the inflation rate for patient co-payments, and the rise in health workers' salaries in 2013. In 2013, the government increased salaries for doctors (by 40%), assistant nurses (by 70%), and full nurses (by 50%). Netcare claimed that this was 'unforeseen conduct' by the government, and made a claim for compensation (Unicef and World Bank, 2017). As Tsepong is entirely dependent on the PPP contract for its income, and the level of this income is indexed by a formula that is only weakly linked to changing wages in the local market for clinical labour, it did not increase its own staff salaries equally. That has created staff recruitment and retention problems for Netcare, as well as periodic industrial action by staff. In addition, it is clear that, once settled, these issues could eventually have significant financial implications for the Ministry of Health.

As Table 5 shows, the combination of these four factors has led to great volatility in the amounts invoiced by Tsepong. The table also highlights that there has been an increasing tendency for the MoH to pay less than the amounts invoiced by Tsepong (particularly in relation to 2015/16, in which all payments due for treatments above the upper demand parameter have not been paid (UNICEF and World Bank, 2017). This raises a question of whether the shortfall in payments will at some stage have to be corrected, with potentially significant financial implications for the MoH.

Table 5. Actual MoH expenditure on Tsepong

Financial Year	Invoiced Amount (M)	Actual Expenditure	Actual Expenditure	% Annual Increase	Amounts Invoiced minus	% Annual Increase in

		(net of VAT) (M)	(gross of VAT) (M)	in Invoiced Amount	Actual Expenditure (gross of VAT) (M)	Actual Expenditure
2012/13	435.55	409.86	463.35	-	-27.8	-
2013/14	575.3	463.58	533.41	32	41.89	13.1
2014/15	598.12	482.44	555.12	4	43	4.1
2015/16	641.99	439.42	517.01	7.3	124.98	-8.9-

Source: Invoices submitted via Tsepong to the MoH, via UNICEF and World Bank, 2017

There is a clear view among some development stakeholders that rising expenditures on Tsepong have rendered the PPP contract financially unsustainable, especially when set against the priority of addressing the burden of HIV/AIDS in the country – the prevalence of which is, at 26.4%, more than four times the average for sub-Saharan Africa (UNICEF and World Bank, 2017). The Queen Mamohato Memorial Hospital is not accredited to provide treatment and follow up for HIV-positive patients, though its filter clinics can do so.[6] It is also evident that from the perspective of broader efforts to strengthen the healthcare system in Lesotho, the decision to prioritise high-end services in the capital over rural clinics and preventive medicine is a dubious one. Overall, QMMH doctors constitute close to half of all the doctors in Lesotho (UNICEF and World Bank, 2017).When accounting for district population, per capita expenditure on health in Maseru (at M995 per capita) is double the amount of the second-place district, Qacha's Nek (M460) (ibid). While there is pressure on the government to reallocate doctors to underserved districts to ensure patients have sufficient access to needed healthcare, it is evident that the non-discretionary nature of the payment to Tsepong makes such a move towards allocative efficiency harder to achieve.

4 CONCLUDING DISCUSSION

Theory and evidence both predict that the PPP model will deliver good outcomes in terms of the cost and quality of infrastructure and services (proposition 1). However, they may create additional costs and risks for government (proposition 2) – and such adverse outcomes are likely to be aggravated when government capacity is limited and there is a lack of providers

[6] HIV/AIDS is, by a considerable margin, the major cause of mortality in Lesotho, with 41.4 percent of deaths (adults and children included) in Lesotho attributed to HIV/AIDS in 2014 (UNICEF and World Bank, 2017).

capable of delivering the contract (proposition 3). The case study outlined in this chapter largely validates these propositions. In Lesotho, new healthcare facilities were delivered on time, to budget and in accordance with the output specification. In addition, early analyses of the hospital's performance indicate higher levels of utilisation, clinical quality and patient satisfaction than pertained in the previous national referral hospital, QEI. Although it is not possible to know whether the prices paid for these outcomes are higher than would have been achieved via alternative delivery mechanisms, proposition 1 is substantially borne out.

However, the case study also highlights the scale of the additional financial risks that PPPs can give rise to, and their potential to impact on the state's capacity to achieve allocative efficiency, in line with proposition 2. Further, the case supports proposition 3, which predicts that, in a context of limited government and market capacity, and ineffective scrutiny of plans for, and behaviour in relation to, the contract, such PPPs can pose a threat to the ability of policymakers to meet their wider social objectives. In this case, the government and its advisers chose to proceed with the PPP despite strong evidence that the future costs were rising well beyond the level regarded as affordable ex ante. It is also apparent that the structure of the contract has served to generate highly volatile expenditures and a great deal of budgetary uncertainty, and is likely to continue to do so over the contract period.

Debates about whether a particular asset or service is 'affordable' are complicated by the fact that 'affordability' has no precise economic meaning. In standard welfare economics, an individual's willingness to pay for goods or service is the focus of study, and economists are generally not interested in whether someone has the ability to pay. However, in the public policy literature, analysis of affordability normally focuses on what has to be foregone in order to obtain the goods under consideration, and whether this is reasonable or excessive. In the health sector, what is foregone may be regarded as excessive if it compromises in some way the ability of government to address priority health needs. Precise information on those foregone benefits, especially in relation to allocations to address the country's HIV/AIDS burden, is necessary to assess more comprehensively whether the costs borne by the government of Lesotho are 'affordable'.

For advocates of private sector-oriented development policy, this is an important learning point. Private finance – and engagement with the private sector more generally – can play an important role in helping governments address their social infrastructure gap, potentially improving both investment decisions and service delivery. But this may also create avenues for self-interested state and private sector employees to take actions that undermine the public interest. Development agencies that advocate for the expansion of PPPs in such settings should ensure that governments have adequate budgetary capacity to support the substantial expenditures that large-scale capital-intensive PPPs can generate. Governments in the African region should ensure that highly ambitious projects, such as the one studied in this chapter, proceed only on the basis of rigorous and independent scrutiny of project plans and forecasts, and that they have adequate budgetary institutions and mechanisms in place to support the expenditures generated. Major investments in these areas may be required, alongside those relating to asset delivery and the management of the project over the long term.

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